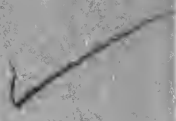
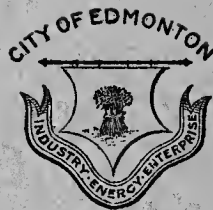
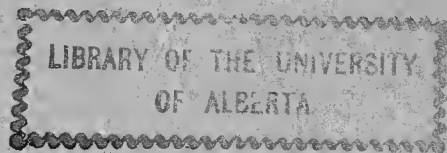


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REPORT
OF THE
LOCAL BOARD OF HEALTH



CITY OF EDMONTON
ALBERTA

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BOARD OF HEALTH, 1938

Dr. R. M. Shaw, Chairman
Dr. E. A. Roe Ald. A. Bissett Dr. W. Morrish (Public School Board)
Ald. F. C. Casselman Mr. J. O. Pilon (Separate School Board)

EX-OFFICIO MEMBERS:

Mayor J. W. Fry
Dr. G. M. Little, M.O.H. Mr. A. W. Haddow, City Engineer
S. Main, Secretary

1939

Dr. R. M. Shaw, Chairman
Dr. E. A. Roe Ald. F. C. Casselman Dr. W. Morrish (Public School Board)
Ald. S. Parsons Mr. C. E. Gariepy (Separate School Board)

EX-OFFICIO MEMBERS:

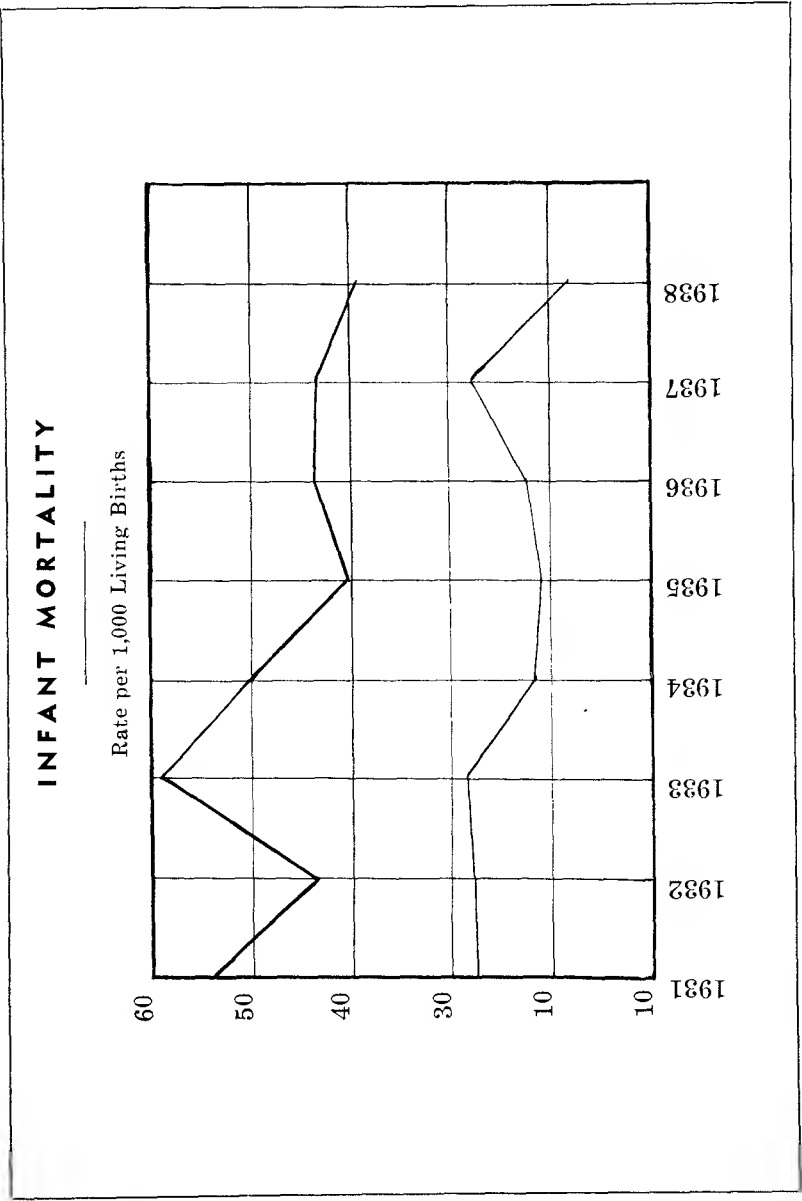
Mayor J. W. Fry
Dr. G. M. Little, M.O.H. Mr. A. W. Haddow, City Engineer
S. Main, Secretary

STAFF:

Medical Officer of Health	G. M. Little, M.D., D.P.H.
Secretary	S. Main, A.R. San. I.
Chief Health Inspector	W. R. Graham, R. San. I. (Cert.)
Health Inspector	J. H. Blackburn, A.R. San. I.
Health Inspector	A. P. Methuen, A.R. San. I.
Health Inspector	J. D. Williams
Quarantine Officer	R. T. Anderson, A.R. San. I.
Chief Food Inspector	J. H. Part, V.S., M.D.V.
Meat Inspector	D. Morrison, V.S.
Dairy Supervisor	C. Ellinger, M.R. San. I.
Analyst	H. C. Graham, B.A.
Statistician	Miss B. B. Murray
Public Health Nurse (Sr.)	Miss M. Griffith, R.N.
Public Health Nurse	Miss S. C. Christensen, R.N.
Public Health Nurse	Miss H. I. Chisholm, R.N.
Clerk	Miss C. R. Rose
Stenographer	Miss Dorothy Derbyshire
Junr. Inspector	Lloyd Alexander

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Light line—"Diseases largely preventable."

Annual Report of Medical Officer of Health

Chairman and Members of the
Local Board of Health.

Gentlemen:

Herewith are submitted reports from the various services conducted by this Board during 1938, and also from certain voluntary and official health agencies who have worked in co-operation with us during the year.

The general death rate showed no change from that of 1937, remaining at 7.9 per thousand. Deaths from heart disease and cancer showed moderate increase, while the increase from pneumonia was very considerable. It is expected that new treatment now available for the latter disease will reduce its mortality rate during the coming year. There was a marked reduction in the number of deaths from influenza and accidents, while the infant mortality rate was the lowest yet recorded for the city. This steadily diminishing death rate of our infants is, I believe, a reflection of the increasing pre-natal and post-natal supervision given mothers and infants by private physicians and our public health nurses.

The total number of cases of communicable diseases was increased by an epidemic of mumps, which gave 5,725 cases. This disease is mild, and no deaths or serious complications were reported. Cases of scarlet fever and measles showed marked reduction from the previous year. Eighteen cases of diphtheria were recorded during 1938. Twelve of these cases occurred in January and were directly traceable to contacts from an outside point that previously had a case of the disease in their home. Obviously, proper precautions were not taken in connection with these people, and the incident serves to illustrate the danger to our citizens when surrounding areas are not provided with proper health supervision.

The Kinsmen's Club continues its valuable service in supervision of cases and contacts of tuberculosis.

Our citizens have neglected vaccination against smallpox until a potentially dangerous situation now maintains. We are attempting to make parents aware of the need for protecting their children against this disease.

The number attending child welfare clinics was increased during the year.

The need for low cost housing continues to be an urgent problem. The present congestion in many unsuitable quarters greatly increases our problems in sanitation, communicable disease and general physical and mental health. Many complaints are received regarding housing which does not meet our health regulations. We are faced with the impossible situation of dwellings which should be condemned, but no other suitable accommodation being available to the tenants of such dwellings.

General sanitation leaves something to be desired in that numbers of our lanes are periodically strewn with garbage. This appears to be due chiefly to the lack of proper containers and failure to fix containers so they cannot be upset. We are asking householders to co-operate in overcoming this health hazard by meeting the requirements of the City by-law governing the matter. Garbage dumps within the city limits have been a source of persistent complaint. Steps are being taken for the elimination of these dumps as rapidly as practicable.

Supervision of the city's food supply, as indicated by the enclosed reports, constitutes a considerable volume of work. With few exceptions, we have re-

ceived excellent co-operation from those engaged in handling foodstuffs. The amount of food condemned as unfit for human use showed marked reduction from the previous year.

The high standard maintained in the milk supplied to our citizens is an outstanding credit to our Dairy and Laboratory branches, and an indication of the responsible co-operation of our milk producers. Following ten cases of undulant fever which occurred amongst our citizens in 1937 and January of 1938, the Local Board of Health tested for this infection all cows from which milk was delivered directly to consumers. Reactors were removed from these dairy herds, and since this step was taken only one case of human infection has developed in the city. In this case the evidence pointed to an unauthorized milk supply as the source of the infection. We are indebted to the Provincial Laboratory for their co-operation in carrying out the technical work in connection with this problem.

This Department has co-operated with the University and Nursing schools of the city in the teaching of public health and we have made our facilities available to students for observation of practical work.

Yours respectfully,

G. M. LITTLE,
Medical Officer of Health.

EXPENDITURE

	1938	1937
Salaries	\$ 31,106.77	\$ 31,289.60
Supplies	1,196.08	1,306.91
Transportation	5,061.74	4,844.53
Sundries	826.97	578.35
Uniforms	123.57	176.50
Retirement allowance	1,000.00	
Bath house	569.36	
	<u>\$ 39,884.49</u>	<u>\$ 38,195.89</u>

REVENUE

Inspection fees	729.75	595.50
	<u>\$ 39,154.74</u>	<u>\$ 37,600.39</u>

DIVISION OF EXPENDITURE

	Adminis- tration	Communicable Disease	Laboratory Service	Milk Control	Food Inspection	Public Health Nursing	Sanitation	Vital Statistics	Totals
Salaries	\$ 7,484.46	\$ 2,723.90	\$ 3,146.45	\$ 2,091.37	\$ 2,961.66	\$ 3,376.08	\$ 8,052.54	\$ 1,270.31	\$ 31,106.77
Retirement									
Bonus	1,000.00								1,000.00
Supplies	474.73	335.51	207.76	29.90	14.97	24.97	92.13	16.11	1,196.08
Transportation	440.00	526.93	505.84	1,200.00	682.50	587.38	1,119.09		5,061.74
Phones	107.70	61.20	15.00	18.00	15.00	18.00	77.40		312.30
Sundries	101.49	25.64	59.27	265.95	36.72	19.25	6.35		514.67
Uniforms		21.72			21.73		80.12		123.57
Bath House							569.36		569.36
	<u>\$ 9,608.38</u>	<u>\$ 3,694.90</u>	<u>\$ 3,934.32</u>	<u>\$ 3,605.22</u>	<u>\$ 3,732.58</u>	<u>\$ 4,025.68</u>	<u>\$ 9,997.00</u>	<u>\$ 1,286.42</u>	<u>\$ 39,884.49</u>
	24.	9.3	9.9	9.1	9.3	10.1	25.1	3.2	100

SUMMARY OF STATISTICS

Area of City (including 1,000 acres of water), 26,778 and 2,147 acres
in Parks.

	1938	1937	1936	1935	1934
Population	88,887	87,084	85,696	81,621	79,773
Persons per acre of land	3.42	3.34	3.32	3.16	3.10
School enrolment	18,245	17,885	18,396	18,241	18,307
Natural Increase of population	893	892	738	776	789
Cost per capita	.44	.43	.42	.39	.42
Births, excluding stillbirths	1,602	1,565	1,432	1,394	1,383
Rate per 1,000 population	18.	18.4	16.84	17.42	17.28
Stillbirths	30	42	50	23	37
Rate per 1,000 births	18.7	26.13	33.75	16.23	26.05
Deaths, excluding stillbirths	709	673	694	618	594
Rate per 1,000 population	7.97	7.9	8.16	7.7	7.42
Deaths under 1 year of age	63	68	63	56	70
Infant mortality rate per 1,000 living births	39.3	43.45	44	40.17	50.61
Deaths from childbirth	4	3	6	7	5
Maternal mortality per 1,000 births	2.5	1.9	4.18	5.02	3.6
Marriages	1,653	1,492	1,414	1,312	1,313
Rate per 1,000 population	18.57	17.55	16.63	16.40	16.4
Non-resident births in city	1,203	1,132	948	936	791
Non-resident deaths in city	472	480	443	402	325
Non-resident deaths under 1 year	40	52	33	36	34

VITAL STATISTICS

Births

There were 1,602 City births in 1938, 789 male and 813 female, an increase of 37 over 1937, when there were 1,565 births, 744 male and 821 female.

Born in institutions, 1,549, or 96.7% ; born at home, 37.

Attended by physician, 1,596; attended by Victorian Order of Nurses, 37 ~~7,000~~; unattended, 5; double births, 15.

Maternal parentage:

	1938	1937
Canada	1,073 or 67 %	1,008 or 64.5%
British Isles	211 or 13.2%	268 or 17.1%
Europe	197 or 12.3%	174 or 11.1%
U.S.A.	113 or 7.0%	110 or 7.0%
Other countries	8 or .5%	5 or .3%
	1,602 or 100 %	1,565 or 100 %

Seventy-eight or 4.9% of the 1938 births and 82 or 5.24% of the 1937 births were illegitimate.

Stillbirths

Male, 17; female, 13; total, 30.

Born in hospital, 27; at home, 3; unattended, nil.

Causes of foetal deaths:

Dystocia, 18.

Malformation, 2.

Prematurity, 3.

Other diseases or condition of mother, 7.

Deaths

Male, 414; female, 295; total, 709; an increase of 36 over 1937, when there were—male, 389; female, 284; total, 673.

	1938	1937
Canada	303 or 42.7%	328 or 48.7%
British Isles	213 or 30.0%	179 or 26.6%
Europe	123 or 17.4%	92 or 13.7%
U.S.A.	55 or 7.8%	48 or 7.1%
Other Countries	15 or 2.1%	26 or 3.9%

Deaths under 1 year of age—

Male, 34; female, 29; total, 63.

Infantile mortality rate per 1,000 living births, 39.3.

In 1937 there were—

Male, 37; female, 31; total, 68.

Infantile mortality rate per 1,000 living births, 43.45.

Infant Mortality

Classifying the causes of deaths under one year of age from standpoint of preventability:

Class 1—Causes to a great extent non-controllable—premature birth (under 7 months), congenital debility, congenital malformation.

Class 2—Capable of reduction by hygiene, sanitation, isolation and treatment—tuberculosis, syphilis, acute respiratory diseases, acute infectious diseases.

Class 3—Capable of great reduction through care, proper feeding, pre-natal care—marasmus, acute gastro-enteritis, injuries at birth, premature (over 7 months).

Of the 63 cases under one year of age:

Class 1—24 or 38.1%.

Class 2—13 or 20.6%.

Class 3—26 or 41.3%.

ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH FOR 1938—(Continued)

	Total	M	F	Under 1	1	2	3	4	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
25. Other diseases of the circulatory system.....	17	33	24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27. Pneumonia.....	58	41	17	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28. Other diseases of the respiratory system (tuberculosis excepted).....	8	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
29. Diarrhoea.....	7	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30. Appendicitis.....	17	13	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31. Diseases of the liver and biliary passages.....	15	6	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32. Other diseases of the digestive system.....	18	11	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
33. Nephritis.....	30	19	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
34. Other diseases of the genito-urinary system.....	15	11	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36. Other diseases of pregnancy, childbirth and puerperal state.....	4	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37. Diseases of the skin and cellular tissues and of the bones and organs of locomotion.....	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38. Congenital debility, stillborn, premature birth and other diseases of early infancy.....	41	20	21	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
39. Senility.....	9	2	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40. Suicide.....	12	12	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
41. Homicide.....	6	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42. Violent or accidental deaths (suicide, homicide excepted).....	23	16	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
43. Causes of death not specified or ill-defined.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTALS.....	709	414	295	34	1	2	3	2	8	3	4	9	8	13	18	20	21	27	41	40	31	39	33	13	6	6	6	6
	709	63	1	2	6	2	13	5	11	15	18	20	31	37	32	51	68	68	50	59	74	54	22	7	7	7	7	7

PRINCIPAL CAUSES OF DEATH FOR THE YEAR 1938

	MONTHS												1938 Population 89,000				1937 Population 85,000					
													Male		Female		Total	Percent of Total Deaths	Rate per 100M Population	Total	Percent of Total Deaths	Rate per 100M Population
	January	February	March	April	May	June	July	August	September	October	November	December	"X"									
90— 95 Diseases of the heart	M 4	4	3	9	7	6	7	5	4	7	8	6	4	83	45	128	18.0	143.8	115	17.	135.3	
45— 53 Cancer.	F 4	3	4	3	4	2	7	4	3	5	5	4	1	42	57	99	13.9	111.2	82	12.2	96.5	
107—109 Pneumonia	M 6	4	3	5	4	2	6	4	3	5	5	4	3	41	17	58	8.2	65.2	35	5.2	41.2	
163—196 External Causes.	F 1	2	1	3	5	2	4	1	1	2	2	2	5	31	10	41	5.8	46.1	52	7.7	61.2	
158—161 Early Infancy	M 3	3	1	1	2	1	1	1	1	1	1	1	1	16	16	32	4.5	35.9	36	5.4	42.4	
82 Apoplexy	M 1	2	1	1	1	1	1	3	1	1	1	1	1	18	14	32	4.5	35.9	36	5.4	42.4	
130—132 Nephritis Acute and Chronic	M 1	1	4	2	1	2	2	2	1	1	1	1	1	19	11	30	4.2	33.7	30	4.4	35.3	
23— 32 Tuberculosis.	M 2	2	2	1	2	2	2	1	1	1	1	1	1	3	17	26	3.7	29.2	25	3.7	29.4	
11 Influenza.	M 2	1	1	1	1	1	1	1	1	1	1	1	1	9	10	19	2.7	21.4	47	7.	55.3	
121 Appendicitis	F 3	3	1	1	1	1	3	1	1	2	1	1	1	13	4	17	2.4	19.1	8	1.2	9.4	
157 Malformation.	M 1	1	1	1	1	1	1	1	1	1	1	1	1	4	5	9	1.3	10.1	10	1.5	11.8	
119—120 Diarrhoea	M 1	1	1	1	1	1	1	1	1	1	1	1	1	6	1	7	1.	7.9	11	1.6	12.9	
140—145 Puerperal State	M .	1	1	1	1	1	1	1	1	1	1	1	1	4	4	4	.6	4.5	3	.5	3.5	
Totals.	M 22	33	19	22	28	18	24	20	17	24	25	25	22	299	203	502	70.8	564.	490	72.8	576.6	
Other Causes.	F 19	21	11	17	13	11	12	11	18	10	20	22	18	115	92	207	29.2	131.5	183	27.2	215.3	
Total	M 30	42	29	29	39	23	32	30	31	30	29	43	27	414	295	709	100.0					
Total deaths	F 28	29	20	26	16	16	20	17	27	18	29	29	2	414	295	709	100.0					

"X"—Denotes outside deaths of Edmonton Citizens.

MORTALITY FROM HEART DISEASES 1934 TO 1938

Year	Total Deaths	Deaths from Heart Diseases	Percent of Total Deaths	Rate Per 100M Population
1938	709	128	18.05	143.8
1937	673	115	17.08	135.3
1936	694	119	17.2	140
1935	618	100	16.2	125
1934	594	112	18.8	140

Of the 1938 deaths 83 were male and 45 female.

MORTALITY FROM CANCER, 1934 TO 1938

Year	Total Deaths	Deaths from Cancer	Percent of Total Deaths	Rate Per 100M Population
1938	709	99	13.9	111.2
1937	673	82	12.2	96.5
1936	694	93	13.4	109.4
1935	618	87	14	108.75
1934	594	82	13.8	102.5

Of the 1938 deaths 42 were male and 57 female.

MORTALITY FROM PNEUMONIA, 1934 TO 1938

Year	Total Deaths	Deaths from Pneumonia	Percent of Total Deaths	Rate Per 100M Population
1938	709	58	8.2	65.2
1937	673	35	5.2	41.2
1936	694	41	6	48.2
1935	618	34	5.5	42.5
1934	594	32	5.3	40

Of the 1938 deaths 41 were male and 17 female.

MORTALITY FROM TUBERCULOSIS, 1934 TO 1938

Year	Total Deaths	Deaths from Tuberculosis	Percent of Total Deaths	Rate Per 100M Population
1938	709	26	3.7	29.2
1937	673	25	3.7	41.2
1936	694	22	2.1	23.9
1935	618	27	4.4	33.7
1934	594	17	2.9	21

Of the 1938 deaths from tuberculosis (all forms) 17 were male and 9 female.

There were 37 new cases of tuberculosis (all forms) reported and 26 deaths, giving an increase of 11 cases.

MORTALITY FROM EXTERNAL CAUSES, 1934 TO 1938

Year	Total Deaths	Deaths from External Causes	Male	Female	Suicide	Homicide	Accidental	Percentage of Total Deaths	Rate Per 100M Population
1938	709	41	31	10	12	6	23	5.8	41.6
1937	673	52	39	13	14	1	37	7.7	61
1936	694	51	40	11	8		43	7.3	60
1935	618	39	27	12	10	1	28	6.3	50
1934	594	49	44	5	13	2	34	8.3	61

MATERNAL MORTALITY

There were four maternal deaths. The maternal death rate calculated in the usual manner of proportion of maternal deaths to the number of live births gives a rate of 2.5 per 1,000 living births. None of the maternal deaths were associated with living births. One was abortion and three no birth. The maternal death rate for 1937 was 1.9.

COMMUNICABLE DISEASE DEATHS

There were 8,315 cases of communicable disease reported during the year 1938, of which 4,214 were males and 4,101 were females; compared with 5,821 cases in 1937, of which 2,881 were males and 2,940 were females.

The morbidity rate per thousand of population was 93.3 compared with 68.5 for 1937.

	1938		1937	
	Cases	Deaths	Cases	Deaths
Poliomyelitis	7	2	7	.
Diphtheria	18	4	3	1
Encephalitis Lethargica		2	1	2
Scarlet Fever	484	2	684	4
Whooping Cough	49	1	257	2
Pneumonia (lobar)	17	28	6	14
Tuberculosis	37	26	61	25
Syphilis	61	4	66	1
Meningitis	4		1	1
Measles	465		2,562	3
Erysipelas	28		49	4
Puerperal Septicæmia			1	1

Altogether reportable disease was responsible for 9.87% of the total deaths, 709.

ISOLATION HOSPITAL

Seven hundred and nineteen patients were admitted and 83 carried over from 1937, making a total of 802. There were 703 discharged; 30 died, and 69 remained at the end of the year.

The diseases hospitalized include:

Scarlet Fever	453	Typhoid	6
Diphtheria	26	Poliomyelitis	17
Erysipelas	30	Polio-suspects	27
Tuberculosis	30		

and many complications of infectious conditions.

The deaths included:

Tuberculosis	6	Poliomyelitis	3
T. B. Meningitis	1	Diphtheria	6
Scarlet Fever	6	Encephalitis	1

IMMUNIZATION

	Smallpox	Diphtheria	Diphtheria & Scarlet Fever	Scarlet Fever	Whooping Cough	Schick Test	Dick Test	Typhoid
1937—Board of Health	93	86	362	3,411	77	.....	28	1
Public School Board		1,082	.....	.....	.....	.....	.....	.....
R.C. Sep. School Board	227	238	.....	.....	.....	.....	.....	.....
	320	1,406	362	3,411	77	.....	28	1
1938—Board of Health	180	439	575	47	14	86	3	7
Public School Board		1,733	.....	.....	.....	.....	.....	.....
R.C. Sep. School Board	159	172	.....	.....	.....	.....	.....	.....
	339	2,344	575	47	14	86	5	7

COMMUNICABLE DISEASE 1938-1934

POPULATION, 1938—89,000										
	1938		1937		1936		1935		1934	
	C	D	C	D	C	D	C	D	C	D
Anterio Poliomyelitis	7	2	7	..	3	1	34	2	1	1
Cerebrospinal Meningitis	4	..	1	1	1	..	1	..	1	..
Diphtheria	18	4	3	1	6	1	7	1	3	..
Diphtheria Carriers	9	..	1	..	..	..	19	..	..	..
Encephalitis Lethargica	2	..	1	2	..	1	..	..	1	..
Scarlet Fever	484	2	684	4	362	4	148	2	63	..
Smallpox .....	..	..	..	..	1	..	..	..	..	..
Chickenpox	1083	..	1132	..	1286	1	994	..	529	..
Measles	465	..	2562	3	1176	1	3105	1	32	..
Mumps	5725	..	350	..	123	..	236	..	554	..
Rubella	28	..	330	..	5384	1	10	..	4	..
Whooping Cough	49	1	257	2	1243	10	190	..	715	1
Actinomycosis .....	..	..	1	..	..	..	..	..	..	..
Erysipelas	28	..	49	4	53	5	42	4	24	3
Ophthalmia Neonatorum .....	..	..	..	..	1	..	..	..	..	..
Pneumonia Lobar	17	28	6	14	..	15	6	19	5	12
Puerperal Septicaemia .....	..	..	1	1	..	..	1	..	..	..
Septic Sore Throat	7	..	4	..	5	..	4	..	2	..
Trachoma .....	..	..	1	..	..	..	..	..	..	..
Tuberculosis (Pulmonary)	34	17	60	20	63	15	72	21	43	11
Tuberculosis (other forms)	3	9	1	5	5	7	7	6	6	6
Tularaemia .....	..	..	..	..	..	..	..	..	2	..
Typhoid	5	1	..	..	21	4	3	2	1	..
Typhoid Fever Para	4	..	2	..	..	..	1	1	..	..
Undulant Fever	2	..	8	..	1	..	..	..	..	..
Venereal Disease—										
Chancroid .....	..	..	..	..	..	..	15	..	24	..
Gonorrhoea	282	..	287	..	252	..	250	..	277	..
Syphilis	61	4	66	1	91	11	102	8	78	5
Totals	8315	70	5814	58	10082	78	5246	68	2363	39
Non-notifiable—										
Influenza .....	..	19	7	47	..	36	..	18	..	13
Mycosis .....	..	..	..	..	..	1	..	..	..	..
Trench Mouth	9	..	..	..	..	..	7	..	4	..
Total deaths, all causes	709	..	673	..	694	..	618	..	594	..
Morbidity rate per 1,000 population	93.4	..	68.4	..	118.6	..	65.6	..	29.5	..
C—Cases.										
D—Deaths.										

COMMUNICABLE DISEASE REPORT BY SEASON AND SEX FOR 1938

	Total	M	F	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Anterio Poliomyelitis.	7	4	3	1						1	3	2			
Deaths	2	2									2				
Cerebrospinal Meningitis.	4	3	1			1		1						1	
Diphtheria.	18	6	12	12	1			1		1		1	1		
Deaths	4	1	3	2	1					1					
Diphtheria Carriers.	9	4	5	1	4			1				1	2		
Encephalitis Lethargica.															
Deaths	2	1	1	1											1
Scarlet Fever.	484	233	251	59	57	67	36	50	35	17	26	25	34	44	34
Deaths	2	2													
Chickenpox.	1083	503	580	150	53	70	56	71	89	68	39	38	95	164	190
Measles.	466	242	223	78	67	15	43	106	84	62	33	3	1		3
Mumps.	5726	2880	2845	608	1077	1393	1227	785	347	124	79	33	24	17	11
Rubella.	28	18	10	4	2	5		3	2	2		2	2	7	1
Whooping Cough.	49	18	31	11		5	1	1	3	7	2	9	2	8	
Deaths	1		1												
Erysipelas.	28	15	13	6	3	3		1	1	1	1	2	3	3	2
Pneumonia Lobar.	17	11	6					1	1	1			2	4	9
Deaths	28	17	11	2	3	1	3	3	1	1		5		6	3
Septic Sore Throat.	7	3	4					2			4				
Tuberculosis (Pulmonary).	34	12	22	2	3	2	4	3	1	4	3	3	2	3	4
Deaths	17	11	6	2	2	4	1	1	1	2		1	1	2	
Tuberculosis (other forms)	3	2	1			1		1							
Deaths	9	6	3	1				1	2	2	1	1	2		2
Typhoid Fever.	5	2	3	2				1			1	1			
Deaths	1		1					1							
Typhoid Fever (Para)	4	2	2			1		3							
Undulant Fever.	2	2		1									1		
Veneral Diseases—															
Gonorrhoea.	282	208	74	19	15	20	15	18	30	35	16	18	27	37	32
Syphilis.	61	46	15	4	6	4	3	5	6	6	4	3	7	8	5
Deaths	4				1			1					1		
Total Cases.	8315	4214	4101	958	1285	1588	1390	1052	598	326	181	140	203	297	293
Total Deaths.	70	44	26	8	8	5	5	7	4	6	3	7	4	9	4

"KINSMEN'S" TUBERCULOSIS NURSING SERVICE

Visits—	
Total visits made by nurse.....	2,348
Visits to T.B. cases.....	867
Visits to suspect cases	239
Visits to contact cases	1,000
Co-operative visits	157
Not seen, moved, etc.	89
Contacts of T.B. visits	754
Total number of cases at end of month.....	308
Office—	
Number of visits to office ..	181
Letters written	10
Clinic Report—	
New Cases:	
Active Cases. City	22
..... Country	23
Suspects City	35
..... Country	34
Contact City	162
..... Country	162
No Contact. City	219
..... Country	219
Total	438
Other Cases:	
Admitted to T.B. section	44
Died	9
Discharged Improved	33
..... Left Alberta	5
Total Examinations ..	726
Total X-rays	809
Tuberculin:	
Total tests made	365

PUBLIC HEALTH NURSING**MENTAL HYGIENE CLINIC**

EDMONTON—Dr. W. J. McAllister, Superintendent of the Provincial Mental Institute, was in charge of the actual clinics in this centre during 1938. Forty-one clinics were held as compared with forty in 1937. **Fifty-seven new** cases were dealt with and 136 follow-ups made. This shows some decrease over the clinic load in 1937. In May of 1938 the Baby Clinic moved into the quarters prepared at 10182 - 100th Street. The Mental Hygiene Clinic is using the same accommodation and finds it much more satisfactory than the previous quarters.

CHILD WELFARE CLINICS

These clinics are held twice weekly with physicians in attendance. A weighing clinic is held once a week under the direction of the Provincial Department of Health nurse in charge.

	1938	1937	1936	1935	1934
Number of clinics held.....	100	95	100	92	102
Babies in attendance	3,860	3,567	3,686	3,306	4,066
Pre-school attendance	1,103	1,167	1,261	1,022	1,158
Total	4,963	4,734	4,947	4,328	5,224
Average	49.6	49.8	49.47	47.0	51.2
New cases admitted (babies).....	860	817	808	714	779
New cases admitted (pre-school).....	148	189	178	142	196
Babies referred to family doctor.....	22	65	35	46	63
Pre-school referred to family doctor.....	49	75	63	27	61

Dr. J. Calder, Dr. F. J. Follinsbee and Dr. Mildred Newell were in attendance to examine and advise parents regarding infants' care and feeding.

Medical students, public health nursing students and nurses in training from the University and Royal Alexandra Hospitals, as well as home economic students, have been in attendance at the clinics.

Ninety-eight out-of-town cases attended during the year.

In May the clinic was moved from the Civic Block to 10182 100th Street. The new quarters are commodious and satisfactory in every way.

Forty-five pre-natal cases received special instructions and visits have been made to diabetic cases, children's shelters and private nursing homes. Creche meetings have been attended and cases investigated as to eligibility of Creche services.

Two thousand, nine hundred and eighty-two home visits were made.

WEIGHING CLINICS

	1938	1937	1936	1935	1934
Number of weighing clinics held	50	46	47	45	50
Total attendance	675	501	485	615	743
Average	13.5	10.9	10.3	13.7	14.8

Fifty weighing clinics were held. No new cases are admitted at these clinics as no doctors are in attendance. Parents are given advice on matters of routine care by the nurse on duty.

Attendance According to Age at Both Child Welfare and Weighing Clinics

	1938	1937	1936	1935
Babies under 1 year	3426	3047	3152	2697
Babies under 2 years	999	903	898	948
	4425	3950	4050	3645
Pre-school under 7 years	1213	1285	1298	1382
Total	5638	5235	4943	5432

It is particularly gratifying to have to report that the infant mortality rate for this year has been reduced to 39.3 per 1,000 living births; i.e., the lowest point attained in the quinquennial period just ending. I am of the opinion this result has been brought about by the following causes: (1) By the decided increase in pre- and post-natal visits made by your staff, and (2) By the definite amount of slum clearance that has been effected within the past few years.

Many problem cases of a domestic nature were straightened out to the satisfaction of all concerned.

PRE-NATAL VISITS

	1934	1935	1936	1937	1938
City nurse	291	388	316	404	460
V.O.N.	253	251	222	250	257

There were 184 new pre-natal cases in 1938 added to our roll.

The Red Cross Society and Junior Hospital League as in the past supplied very many layettes and also milk and bedding for needy families. Both of these organizations have done remarkable philanthropic work and are deserving of the thanks of all our citizens. The Relief Departments have also, when called upon, co-operated splendidly.

INFANT MORTALITY, 1938

BY SEASON

BY AGE

	TOTAL	January	February	March	April	May	June	July	August	September	October	November	December	1st Day	1st Week	2nd Week	3rd Week	4th Week	Total Under 1 Month	1-3 Months	4-6 Months	7-9 Months	10-12 Months
9—Whooping cough	1																			1	1		
11f—Influenza with other causes	2		1										1	1						1	1		
63—Rickets	1												1									1	
67—Enlarged Thymus	1										1			1									
107a—Broncho pneumonia	1	3			1							1	1						1	2	3	2	
108—"D" Type Lobar pneumonia	1											1								1			
112—Bronchial Asthma	1										1											1	
119—Enteritis or Diarrhoea	4			1					1		1	1	1							4			
121—Appendicitis	1																						
122b—Intussusception	1							1														1	
157b—Spina Bifida	3		1			1						1		1			2		3				1
157c—Congenital Malformation of Heart	3			1			1							1					1	2			
157e—Congenital Malformations	2								1			1				1			1			1	
158—Congenital Debility	2								2														
159—Premature Birth	20	3	5	1	1	2	1	1	1	1	1	2	1	13	5	1	2	2	20				
160b—Injury at Birth	3							2	1					2	1								
161a—Atelectasis	5					1			1	1		1	1	3	2				3				
161b—Icterus of the newborn	1																						
161f—No cause given, no doctor in attendance	1																						
182—Accidental suffocation	2	1	1									1								1			
188—Injury by animal (dog)	1					1																	
	63	7	8	3	2	6	2	4	6	3	6	10	6	21	9	1	4		35	16	5	6	1

POST-NATAL VISITS

	1934	1935	1936	1937	1938
City nurse	139	201	172	239	270
V.O.N.	448	646	620	352	603

Visits classified as post-natal are those visits made to homes during the first six weeks after confinement.

All new mothers are encouraged to breast-feed their babies. However, in spite of such advice, artificial feeding is often resorted to. Much work remains to be done along this line. All mothers are advised of the necessity of a post-natal examination by their physician at the end of six weeks.

DISTRICT VISITS

	1934	1935	1936	1937	1938
Visits to homes	3481	3753	2508	2775	1170
Special investigations	65	64	94	113	154
Total	3546	3817	2602	2888	1324

During the year household economic internes gave valuable assistance in directing diets and food budgeting in many homes. An interne accompanied your senior nurse a half day weekly and assisted in solving various food problems.

Each nurse taking the public health post graduate course at the University spent two days with our department. All members of our staff co-operated in trying to make these visits worthwhile.

DISABILITIES FOUND DURING DISTRICT VISITS, 1938

	Babies	Pre-School	School Age	Adults
I. Infectious and Parasitic Diseases	10	24	22	17
II. Cancer and Other Tumors .....	...	...	...	...
III. Rheumatic Diseases, Diseases of Nutrition and of Endocrine Glands and other general diseases	2	1	1	10
IV. Diseases of the Blood and Blood Forming Organs .....	...	...	...	...
V. Chronic Poisoning .....	...	...	...	...
VI. Diseases of the Nervous System and of the Organs of Special Sense.....	...	2	...	4
Diseases of the Organs of Vision	2	2	...	1
Diseases of the Ear and of the Mastoid Process	1	2	1	...
VII. Diseases of the Circulatory System .....	...	...	1	23
VIII. Diseases of the Respiratory System.....	18	25	3	21
IX. Diseases of the Digestive System.....	17	60	20	12
X. Diseases of the Genito-Urinary System .....	...	4	1	3
XI. Diseases of Pregnancy .....	...	...	...	9
XII. Diseases of the Skin and Cellular Tissue	25	17	9	9
XIII. Congenital Malformation	1	1	...	...
XV. Diseases of Early Infancy	5	...	...	...
XVI. Senility .....	...	...	...	1
XVII. External Causes	1	3	...	...
XVIII. Not Specified .....	...	...	...	3

HEALTH INSPECTIONS

INSPECTIONS

	1938	1937	1936
Inspections	15,486	17,265	10,868
Re-inspections	3,037	3,801	2,920
Notices, total	6,149	6,545	4,426
Written	1,555	2,216	1,232
Verbal	4,594	4,329	3,194
Complaints from the public	803	705	413
Justified	667	515	295
Unjustified	136	190	118
Received from other Departments	20		
Referred to other Departments	95		

LICENSES

License applications investigated	1,318	1,302	1,259
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HOUSING

During the year regular inspection was made of all rooming and lodging houses, apartments, hotels, etc.

	1938	1937	1936
Sewer and water notices issued	63	110	60
Sewer and water installed, buildings removed, etc....	24	25	11
Extension of time granted	17	32	16
Nothing done	22	53	33
Plumbing permits issued	158	127	149
Plumbing permits issued for old buildings	110	91	20
Alterations to existing plumbing	60	52	

DISINFESTING STATION

	1938	1937	1936
Baths	20,898	22,530	28,551
Verminous	78	27	37
Scabies	539	757	1,025
Disinfested	612	788	1,065
Men washed clothing	18,162	19,132	22,961
Units washed	54,786	57,396	67,048

SCAVENGING

	1938	1937
	cu. yds.	cu. yds.
Refuse removed from North Side	5,168	6,870
Refuse removed from South Side	1,280	1,100

COWSHEDS, STABLES, ETC.

During the year 535 private cow owners paid their annual permits and inspections were made of their premises.

FOOD

	1938	1937	1936
Samples submitted to Provincial Laboratory.	12	25	8
Foodstuffs condemned (lbs.)	16,670	29,832	2,745

Fourteen thousand, seven hundred and seventy-one pounds of foodstuffs were condemned due to being damaged by fire and water and are included in the above.

WATER

	1938	1937	1936
Water samples taken	62	60	71
Negative	43		
*Positive	8		
*Suspicious	11		
Ice samples taken	5	2	2
Negative	5		
Rinse water samples taken	55	73	

Ice cream dipper rinse waters 33
19 over 50,000—notified.

Bottling works rinse waters 22
All negative.

* In all cases where samples were Positive or Suspicious, the wells were chlorinated or placarded as unfit for use and in many cases retest samples were taken which were Negative.

INFECTIOUS AND CONTAGIOUS DISEASES

During the months of April and May the health inspectors spent considerable time in assisting the quarantine officer in quarantining and releasing homes from quarantine. Also investigated by the inspectors throughout the year were cases of tuberculosis, goitre, trench mouth, typhoid fever, scabies, venereal diseases, etc.

INDUSTRIAL HEALTH SERVICE

Besides the regular inspections of working conditions in business premises, a special survey of the plumbing in the business sections of the city was carried out. In all, 990 inspections were made. Two hundred and fifty-seven inspections were made by the health inspectors of premises, included in the above survey, where it was thought a notice to repair plumbing, etc., might be required. To date 62 notices have been issued.

RELIEF

As in the past few years, considerable time was spent in investigating appeals for relief, and valuable assistance was once again given by the various charitable organizations in supplying bedding, clothing, etc.

ENFORCEMENT OF REGULATIONS

	1938	1937	1936
Prosecutions	2	1	0

In connection with the above prosecutions, convictions were received in both cases and the defendants were fined \$5.00 and costs. One prosecution was under By-law 9, section 35, keeping pigs without a permit, and the other, a fish peddler who was selling tullibee as whitefish.

FOOD INSPECTION

January 1st, 1938, there were four abattoirs under city inspection. On September 12th one of these ceased to operate and was demolished. During the year there has been a change in ownership of all the remaining three, and in one extensive alterations are still in progress.

The decline in the percentage of hogs found to be infected with tuberculosis is again noticeable. The percentage of cattle found to be infected with tuberculosis, on the other hand, has increased. Speaking generally, the quality of animals slaughtered during 1938 has shown marked improvement during the year.

MEATS INSPECTED AND CONDEMNED

Beef

	1938	1937	1936
No. of carcasses inspected	3,327	2,806	3,055
Carcasses condemned	12	14	11
Portions condemned	379	396	357
Weight (lbs.) of carcasses and portions condemned	12,597	15,216	9,982

Veal

No. of carcasses inspected	2,901	2,373	3,368
Carcasses condemned	5	7	8
Portions condemned	37	43	45
Weight (lbs.) of carcasses and portions condemned	1,006	1,489	1,739

Mutton

No. of carcasses inspected	1,387	1,701	2,102
Carcasses condemned	3	5	3
Portions condemned	93	151	203
Weight (lbs.) of carcasses and portions condemned	410	612	672

Pork	1938	1937	1936
No. of carcasses inspected	2,534	2,068	2,113
Carcasses condemned	20	28	26
Portions condemned	404	493	551
Weight (lbs.) of carcasses and portions condemned	8,828	9,801	10,936
Totals			
No. of carcasses inspected	10,152	8,948	10,639
Carcasses condemned	40	54	48
Portions condemned	913	1,083	1,156
Weight (lbs.) of carcasses and portions condemned	22,841	27,118	23,329

CARCASSES FOUND TO BE INFECTED WITH TUBERCULOSIS

Beef			
Infected	13	5	15
Percent	.390	.019	.45
Pork			
Infected	264	253	300
Percent	10.46	12.23	13.95

CHIEF CAUSES OF CONDEMNATION, 1938

Beef and Veal	Carcasses	Portions	Weight
Abscess liver		108	1,352 lbs.
Abscess multiple	1	15	635
Actinomycosis	1	146	3,845
Adhesions		93	1,151
Tuberculosis	1	18	1,000
Parasites		18	197
Bruised	3	15	1,563
Emaciation	2		750
Pneumonia	2		500
Miscellaneous (peritonitis, empyemia, mammitis congestion, extensive injuries, immature)	7	2	2,610
	17	416	13,603 lbs.
Mutton			
Parasites		77	180
Bruised		12	65
Miscellaneous (abscess liver, empyemia, peritonitis, abscess multiple)	3	4	175
	3	93	410 lbs.
Pork			
Adhesions		16	185
Bruised		35	486
Contaminated		31	355
Parasites		39	137
Tuberculosis	4	272	4,860
Abscess multiple	5		870
Pneumonia	2		380
Peritonitis	4		630
Putrification		10	105
Miscellaneous (abscess liver, empyemia, peritonitis, septicæmia, frost)	5	1	820
	20	404	8,828 lbs.
Totals			
Beef and Veal	17	416	13,603
Mutton	3	93	410
Pork	20	404	8,828
	40	913	22,841 lbs.

DISEASED ANIMALS

Beef and Veal	396
Mutton	72
Pork	372

(Totals for diseased animals are approximate only, as no figures were obtained for the first four months of the year.)

FOODSTUFFS CONDEMNED

	—Pounds—		
	1938	1937	1936
Meat	22,841	27,118	23,329
Poultry	113	158	81
Fish	27	..	..
Sundries	380	3	1

Foodstuffs condemned by Health Inspectors

Canned goods	13	120	45
Meat	230	22	..
Poultry	..	..	10
Fish	..	..	332
Fruit and vegetables	1,620	10,111	1,018
Candy	..	..	15
Jam	..	..	768
Pickles	..	..	360
Butter and cheese	..	19	180
Cereal	6	..	..
Ice cream	..	60	..
Sundries	30	..	16
Damaged by fire	14,401	18,500	..
	39,661	56,111	26,155

Inspections

	1938	1937	1936
No. of inspections of butcher shops and abattoirs	5,345	5,557	7,464

Complaints

Complaints received from the public	30	35	17
Complaints justified	26	25	15

DAIRY INSPECTION

The results of the reduction tests carried out weekly throughout the year of raw milk which is shipped to pasteurization plants indicated that 97.21 per cent of the samples were in Class 1 under the Standard Methods of Milk Analysis and that 94.96 per cent met even a higher standard than is at present demanded for Class 1 milk under the Standard Methods of Milk Analysis of the American Public Health Association. The difference in the high degree of compliance with the reduction time standards of 5½ and 6 hours being but 2.25 per cent. These figures refer to approximately 10,412 samples.

During the early part of the autumn the average reduction time for the class of milk referred to above was 10 hours and 27 minutes.

The three milk producer organizations whose members ship milk to the pasteurization plants have shown their appreciation of the work we are doing by offering their co-operation and active assistance in maintaining and further improving the high degree of compliance by their members with the milk regulations. This co-operation is probably unique in Canada and is greatly appreciated.

Shown herewith is a table of the classification of bacterial counts per c.c. of both pasteurized and retail raw milk. The table refers to 942 samples of milk in percentages.

No. of Samples		10,000 and Under	11,000 to 25,000	26,000 to 100,000	Over 100,000
409	Pasteurized	86.79	6.84	4.15	2.22
533	Retail raw	63.03	22.13	11.06	3.78
942	Average percentage	74.91	14.48	7.61	3.00

The results of the abortion test of the 51 herds from which raw milk is retailed showed that 1,115 cattle were tested, 12 per cent being positive reactors.

The introduction during the year of the Phosphatase test revealed unsatisfactory conditions at two pasteurizing plants, which were quickly remedied.

The co-operation of the pasteurizing plants is appreciated in their assisting us to improve the quality of the cream by the application of the reduction test. The cream comes from nearly a hundred inspected farms and is used as table cream and in the manufacture of ice-cream. Upon our request the plants agreed to apply the reduction test to the cream as they had previously done for several years to the incoming raw milk. Previously no bacteriological tests had been made of this raw cream. Approximately 1,130 samples were tested. Following special instruction to the cream producers from this office a rapid improvement took place, reduction times of six hours and longer being not infrequent.

We express appreciation of the co-operation extended by the Department of Animal Husbandry, University of Alberta, and especially by Dr. H. R. Thornton, Department of Dairying, University of Alberta, for their assistance in experimental work in connection with the application of the reduction test to cream.

Two educational circulars relating to the reduction test were written and distributed to cream producers.

356 applications for permits were received.

343 applications for permits were granted.

4 applications for permits were refused.

9 permits were suspended indefinitely on account of continued unsanitary conditions.

9 new permits were issued to dairy farmers who were better prepared to meet our requirements.

212 suspensions of producers' permits were made for a period of 3 or 4 days on account of Class 2 milk being shipped, as revealed by the reduction tests.

Inspections made, 870.

LABORATORY REPORT

The following gives a brief summary of the work done during the year. The table below showing the results of the bacterial examination of our retail milk samples, shows a continued improvement over previous years. Eighteen samples out of a total of 848 could not be counted due to the spoilage of the plates by spreaders. Of the remaining 830 samples just over 80 per cent are included in our "special" classification, which included all counts up to fifteen thousand bacteria per cubic centimeter as against 73.1 per cent for the previous year. Also an additional 11.3 per cent placed in our second column gives nearly 91½ per cent of the samples with counts not more than forty thousand per c.c.

	Spec.	15,000 40,000	40,000 100,000	100,000 400,000	Over	Spr.	Total
January	53	12	1	...	...	2	68
February	61	1	5	...	1	3	71
March	46	18	5	4	1	...	74
April	61	4	2	...	...	1	68
May	61	5	2	...	...	1	69
June	56	9	5	3	2	2	77
July	52	5	4	1	2	1	65
August	58	6	4	6	...	...	74
September	48	12	4	1	1	3	69
October	53	11	4	1	...	2	71
November	60	4	1	...	...	3	68
December	56	7	10	...	1	...	74
	665	94	47	16	8	18	848
Percentage	80.1	11.3	5.7	1.9	1.0		100

In Edmonton we have 43 raw milk distributors, some of them with a very small total sale. The pasteurizing plants also handle special jersey milk and homogenized milk. The results arranged in these classes are as follows:

The results arranged in classes are as follows:												
	Spec.	15,000		40,000		100,000		400,000		Over	Spr.	Total
Raw Milk	374	71.4	85	16.2	44	8.4	14	2.7	7	1.3	8	532
Ord. Pasteurized	164	94.7	6	3.4	2	1.1	1	.6	1	.6	5	179
Jersey	67	95.7	3	4.3	0	...	0	...	0	...	3	73
Homogenized	60	96.8	0	...	1	1.6	1	1.6	0	...	2	64
	665	80.1	94	11.3	47	2.7	16	1.9	8	1.0	18	848

It is to be noted, however, that the great majority of our raw milk dealers are very good indeed. Of the 73 counts which were over 40 thousand per c.c., 18 or approximately 25 per cent were obtained from just two dealers, while 35 or about 48 per cent were obtained from seven dairies. This leaves comparatively few to be distributed amongst the others.

There were also examined a total of 92 samples of chocolate dairy drink, of these three were spoiled by spreaders, 76.4 per cent graded special, 9.0 per cent from 15,000-40,000, 9.0 per cent from 40,000-100,000, .1 per cent from 100,000-400,000, and 4.5 per cent over 400,000.

Only about half of our street samples were examined for bacterial count, those which gave too high a count being of course singled out for a retest. All the samples were tested by the methylene blue reductase test; 1520 samples gave only 10 which did not grade No. 1 by this test.

The average butterfat test obtained from these 1517 samples was 4.02 per cent. The average varied little throughout the year, the maximum being 4.26 per cent in November and the minimum 3.91 per cent in April. The average butterfat content for the chocolate dairy drink was 2.63 per cent.

From the Lactometer reading and the butterfat content, the solids not fat were calculated on each of these samples and the average was found to be 8.92 per cent. All of these samples were also checked for flavor and examined and graded for the amount of sediment. The average grade given for sediment was 9.0 out of a possible 10.

In addition to the regular retail samples, several samples of milk were taken and examined for interested parties. Of 70 samples examined for bacteria, three could not be counted on account of spreaders, 54 were graded special, and five others had counts not over 40 thousand. Of 49 cream samples five could not be counted and 23 graded special, and five more were 40 thousand or under. The average butterfat for 79 samples was 4.15 per cent and for 56 cream samples was 24½ per cent.

Some trouble was found in getting our ice cream to rigorously comply with the bacterial standards set out in the Health Act. Out of 42 samples taken for examination four counts were spoiled by spreaders, 18 samples had counts of 15 thousand or less, and seven more not over 100 thousand. Thirteen or approximately one-third were thus above the 100 thousand mark. The total number of samples obtained, however, was rather small.

All the milk from individual producers coming into the city plants has been submitted to the methylene blue test each week. The total number of samples examined was 10,443, of which 433 or about 4.2 per cent failed to grade "number one," under the test. In addition, some 151 special samples were run for the information of producers trying to locate the source of their trouble, of which eight failed to meet the requirements. All of these along with the 1520 distributor samples gives a grand total of 13,634 samples, of which 461 failed to make the No. 1 class.

During the year regular examination was made for us almost daily of the city water. None of the samples examined gave a positive colon test and none gave counts of over 100 per c.c. The highest counts, obtained at the time of the spring run-off in March, were 45, 27, and 20. The next highest count was 15 obtained from one sample in June. All the others were below this figure. Frequent sampling was done at the Civic Block for tests for the amount of free chlorine in the water and at no time was it found to be deficient.

Samples of water from the swimming pools, both public and private, were taken either personally or for us by the Engineer's Department for bacterial examination. The total number of samples obtained was 273. Of these, 183 gave counts of 10 or under and 35 were above the 200 mark. No sample gave a positive test for colon organisms. General supervision was given to the swimming pools throughout the year. Solutions were made up and supplied for testing the water for the amount of free chlorine, and for copper and suitable standards furnished as required. Little trouble was experienced with "algæ" in any of the pools this year. Occasional tests were also made for the alkalinity.

The sewage plants during the year ran with a minimum of trouble and practically no work was done in this connection.